

# IES Newsletter

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## Director's Note

More than a dozen years ago Tom Van Rensselaer let it be known that he was giving thought to deeding some land to IES. This was not a site marginal for residential development, but in fact 31 hectares which had provided a livelihood for generations of his family.

One conversation followed another, as did walks of the property with wildlife biologist Raymond Winchcombe, whose task it was to recommend whether this land would meet future IES program needs. We determined that it would and, with the help of attorney Jack Gartland, Tompkins Farm became an adjunct to the Mary Flagler Cary Arboretum. We were delighted to agree to Tom Van Rensselaer's condition that it be managed identically to the main campus.

The lead story offers some local history and a portrait of a thoughtful friend and generous neighbor.

The *IES Newsletter* is published by the Institute of Ecosystem Studies, located at the Mary Flagler Cary Arboretum in Millbrook, New York.

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## A Piece of History Becomes a Place for Science

Many years ago, Tompkins Van Rensselaer started thinking he should *do something* with the Salt Point property that had been in his family since 1745. The old log cabin had burnt down decades before, and no one had lived there since. He had heard about the Institute of Ecosystem Studies, and went for a visit to check them out. Impressed with the Institute's research programs, especially Director Dr. Gene E. Likens' ground-breaking discovery of acid rain, Mr. Van Rensselaer offered them the 31-hectare (76.6 acre) Tompkins Farm. After surveying the property and assessing its research value, IES accepted the deed to the property in 1993.

But why not sell the farm? As Mr. Van Rensselaer says, it's because he's "for open spaces" and would have hated to see the land get developed. Instead, he hoped IES would "make use of the land to the fullest extent for humankind." As we toured the property together last month, Mr. Van Rensselaer showed me evidence that the Institute's scientists were indeed using the property for experiments: namely, corn-baited deer feeders that apply tick-killing pesticides to the deer's head and neck as they eat.

But he enjoyed even more telling me what he knew of his family's legacy at the site: In 1745, his great-great-grandparents bought their first plot of the land. They cleared away the trees to create an open meadow for farming, and then built a log cabin (the first in the area) and a mill on the property. As adjacent lots became available, they bought them and the family homestead (and the family) grew.

Decades later, their grandson Gouverneur Jay Tompkins was living on the property with his wife Elizabeth Woodford Doty, a woman with an impressive American lineage that began on the Mayflower. They lived in the same tiny cabin, and made a living selling Tompkins Farm apples

and grain. The apples were sold both locally and in England, under the family's large white "T" trademark.

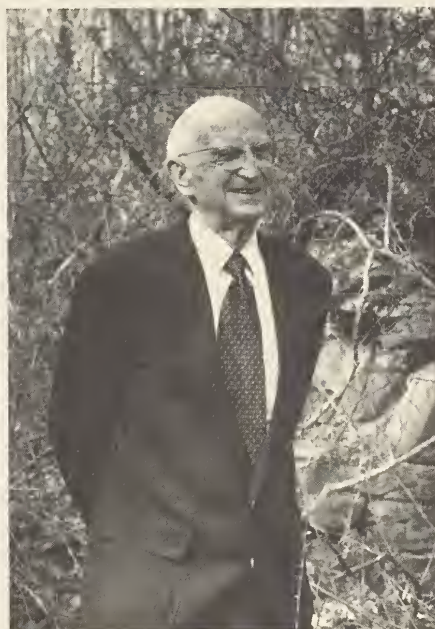
But the granary business abruptly ended when rains sent a fifteen-foot flood (then called a "fresnet") roaring through the creek at the base of the farm, demolishing the mill and submerging the millstones. The Tompkins used a team of oxen to haul the millstones up near the cabin, where they served as platforms for loading and unloading horse-drawn carriage passengers.

By the late 1800s, the cabin was starting to feel pretty cramped, so the Tompkins built a stone addition with a fireplace. This kind of handiwork was typical on family homesteads, where every member of the family learned to be a "jack of all trades" and to rise to daily challenges with strength and determination. So in 1917, when the Tompkins' daughter had her first and only son—Tompkins Van Rensselaer—he was not born into a life of leisure. Not even close.

Raised mainly by his grandparents, Tompkins was given big responsibilities at a very young age. At just eleven, he and a team of horses were plowing the farm's fields. He learned how to make maple syrup, from hand-making the taps to boiling the sap down into syrup. And the boy's small size made him invaluable for clearing debris out of the bottom of the well.

Even at 84 years of age, Mr. Van Rensselaer still remembers the strenuous chores he performed when he was just "knee-high to a grasshopper".

Today, Mr. Van Rensselaer lives up the road a ways, and the old farm looks very different. The cabin, barn and silo are in ruins and trees have reclaimed the entire property. But the millstones still stand regally where the driveway once was, and as Mr. Van Rensselaer says, it's a wonderful open space where "hoot owls talk back and forth to each other" and coyotes, ducks and



Mr. Tompkins Van Rensselaer enjoys visiting and reminiscing about his family's homestead in Salt Point.

continued on page 2



# Adjunct Scientist Dr. Doris Soto Helps Chile Decide How to Use Its Forests

Imagine this: you suddenly become responsible for a huge and essentially pristine piece of forest. What would you do with it? This is the challenge that IES Adjunct Scientist Doris Soto and fellow Chilean scientists are wrestling with.

Obviously, there is a whole range of ways to treat a forest ecosystem. At one extreme is preservation—making the forest completely off-limits to human activity of any kind. At the opposite extreme is 100% human use—harvesting all the timber, fish and other resources you can get as fast as you can get them. Along the middle of the range of options lies conservation—allowing some degree of human use that (you hope) will allow the forest ecosystem to survive in perpetuity.

In a developed country, like the U.S., you might set aside the forest for protection, since many of our forests are already intensively exploited for natural resources like timber, fish, and mineral deposits. But if you were in a developing country, like Chile, just starting to make major use of its natural resources, you would probably opt for conservation. If you could strike the right balance between human use and ecosystem health, your ecosystems would continue to provide resources forever, achieving the elusive goal of “sustainable use”.

To determine just how much—and what kinds of—use could be sustainable in its forests, the Chilean government has turned to a multi-disciplinary team of scientists at the Universidad Austral de Chile (the Southern University of Chile). This March, the government awarded a three-year renewable grant to the team, whose members include a biogeochemist, a geologist, a botanist, a forest ecologist, and Dr. Doris Soto, an aquatic ecologist who also is an IES adjunct scientist.

Dr. Soto has a long history with the Institute, which began when she met Director Dr. Gene E. Likens at a 1990 scientific meeting in Chile. She visited the Institute soon thereafter and, in 1999, became an IES adjunct scientist (featured in IES newsletter 17:1). Since then, she has spent two to four weeks at the

Institute each year, exchanging ideas, arranging collaborations, writing manuscripts and grant proposals and, as during her visit this March, giving lectures about her research in Chile.



*Adjunct Scientist Dr. Doris Soto doesn't just study the forest ecosystems of her native Chile, she also paints them! In September, she will hold an exhibition of her oil paintings, entitled "The Botanical Kingdom" in Chile. (photo provided by Dr. Soto)*

Dr. Soto's recent research has focused on the effects of Chilean forest ecosystems on salmon farming operations. But, what does this have to do with forest conservation? Quite a lot, as it turns out. Salmon farming is just one of the ways the Chilean people already use the fjords and lakes in and near their forests. Dr. Soto and her colleagues have found that healthy salmon farming benefits from good water quality that is itself provided by filtration of rain water through forests dominated by native trees. Dr. Soto and her colleagues have found that when native forests are healthy, they provide plentiful organic matter to inland lakes

that directly and indirectly ends up as food for fish. As a result, the lakes can support more fish overall, so introduced salmon don't drive down native fish populations. In contrast, lakes surrounded by plantation forests of non-native pines do not receive as much usable organic material; in those lakes, salmon often drive native fish species to local extinction.

Just based on this single example linking forests and fish, it's apparent how difficult it is to develop a forest management plan that takes into consideration every interaction in the forest ecosystem. But Dr. Soto and her colleagues, with their range of scientific specialties, are eager to provide the government with the information it needs to make sure Chilean forests are used sustainably.

With the new grant money, additional graduate students and post-doctoral researchers will be brought onto the project. These valuable additions to the research team will help ensure that they will reach their goals for the next three years. They aim to quantify and produce maps of each service the forest ecosystems provide to the Chilean people (such as salmon production and sport fishing) and to develop simulation models to predict what each human use of the ecosystem (such as removing native trees and replacing them with pine plantations) will do to it. As this new phase of the project gets underway, the IES community will be informed of its progress via Dr. Soto's periodic visits to the Institute.

## A Piece of History, from page 1

geese frequently visit.

He is proud to be able to leave behind such a gift—the gift of open space—to a world whose open spaces are disappearing, and is happy to know that IES scientists are already putting the land to good use. Through the work of Institute scientists, the Tompkins family continues the legacy they began in Salt Point more than 250 years ago.

## Ecology Shop Boasts New Eco-Focus



Luanne Panarotti, IES Visitor Services Coordinator

Think you've seen all there is to see in the Ecology Shop? Think again! Since Luanne Panarotti became the Institute's Visitor Services Coordinator last fall, she has gradually begun to push the shop in a new direction. Ms. Panarotti's goal is to make the Ecology Shop more of a museum-type store featuring unique, eco-friendly items that are not widely available.

But don't despair; popular items like the Folkmanis puppets, gardening and nature books and the indoor plant collection will remain. In addition, you'll find an ever increasing selection of products that reflect and extend the IES mission. As buyer for the shop, Ms. Panarotti aims to practice "environmentally sensitive buying", passing over goods that are environmentally damaging in favor of those that come from sustainable practices.

For those with an eye for natural beauty, Ms. Panarotti has selected some necklaces, bead kits and carvings made from Tagua nuts, beautiful ivory-like seeds that on tropical rainforest palm trees. The nuts are harvested sustainably and, because of their economic value, promote rainforest conservation.

Another aspect of environmental sensitivity is finding new uses for items that once would have gone straight to the landfill. Ms. Panarotti is exploring these options as well and has already stocked the Ecology Shop with outdoor gardening tubs made from recycled tires.

And satisfying Ms. Panarotti's own love of the avian world, the Ecology Shop boasts a group of field guides and other birding paraphernalia. She invites people to stop by the shop, where helpful Visitor Services Assistants can introduce them to the new products. She always welcomes suggestions from the IES community and visitors, and can often fulfill special-orders. So, take a trip to the Ecology Shop: treat yourself, and the environment too!

## Weibman Takes IES Best Project Award

This year's IES "Best Project in Environmental Science and Ecology" award at the Dutchess County Science Fair went to Susan Weibman, a seventh grade student at Wappingers Junior High School in Wappingers Falls, NY. Ms. Weibman decided to do her project, entitled "*Are parasitic wasps effective in the control of houseflies?*", because she was concerned about chemical-based fly control in barns and wanted to see if biological control was a viable alternative. As it turned out, two species of wasps did successfully parasitize and kill fly pupae, though at different rates and with less success if the pupae were buried in straw.

The Institute's team of judges, coordinated by Dr. Gary Lovett, chose Ms. Weibman's project for this year's "Best Project" award for its originality, creativity and scientific merit. At the May 3<sup>rd</sup> scientific seminar, Ms. Weibman presented her project to IES staff and then received a Recognition Certificate and \$50 award from Director Dr. Gene E. Likens. The Institute has been giving awards for Best Project and Honorable Mention every year since 1991. This year's Honorable Mentions went to Rebecca Idell, of John Jay High School, Hopewell Junction, NY ("*The clean-up of oil spills with an advanced ceramic foam.*"); Jessica Matthews, from St. Mary's School, Wappingers Falls, NY ("*Not your average rock music: the effects of heavy metals on aquatic organisms.*"); Matthew Milanesi from St. Denis/st. Columba School, Hopewell Junction, NY ("*Toxicity: is road salt good for our environment?*"), and Priscilla Wang from Orville A. Todd Middle School, Poughkeepsie, NY ("*Do water purifiers really work?*").

## Tague Selected as Visiting Scientist

Dr. Christina Tague visited IES during the week of April 22<sup>nd</sup>, as part of the Director's Program for Visiting Scientists. An Assistant Professor of Geography at San Diego State University, Dr. Tague employs approaches from several often-distant fields (namely geography, hydrology, computer science and ecology) to better understand the role of water within ecosystems. While at the Institute, she gave a seminar about her computer model (called RHESys, an acronym for Regional Hydrologic Ecosystem Simulation Systems). The model has already shown great potential for describing water-ecosystem interactions in a wide variety of watersheds, from forests of the Pacific Northwest to fire-dependent chaparral systems typical in Southern California to urban ecosystems like the one she and IES scientists are studying in the Baltimore Ecosystem Study. In the future, Dr. Tague hopes to collaborate with aquatic ecologists at IES as she works to widen the range of systems RHESys can handle.



Tague visiting the IES Greenhouse



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### Calendar

#### CONTINUING EDUCATION

For information, or to request a catalog, call the Continuing Education office at 845-677-9643 or visit [www.ecostudies.org/education/continuing.html](http://www.ecostudies.org/education/continuing.html). Summer semester programs include:

##### Gardening

- July 13 (3 sessions): **The American Kitchen Garden**  
July 14 (1 session): **Year Round Garden Maintenance**  
July 15 (1 session): **House Plant Clinic**  
July 20 (1 session): **The Basics of Stone Wall Construction**

##### Natural Science Illustration

- July 14: (1 session): **Pen and Ink Workshop**

##### Special Workshop

- July 14: (2 sessions): **Seed to Harvest: Growing Vegetables at a Small Organic Farm**

#### SATURDAY ECOLOGY PROGRAMS

Come to **free public programs** on the first Saturday of each month. Children age 6 and up are welcome with an accompanying adult. Pre-registration isn't necessary. If you have questions, call 845-677-7600 ext. 317 for information on upcoming programs:  
July 14: The Life and Times of the Monarch Butterfly - Learn about the fascinating life cycle of the monarch.  
August 3: Take a Peek at the Pond - Cary Pond is full of life! Come with us to explore the pond's edges and its waters - you might get a little wet! Programs are from 1 - 3 p.m. and begin at the Gifford House Visitor and Education Center. [Dress according to the weather for the outdoor programs.]

#### IES SEMINARS

Free **scientific seminars** are held on Fridays in the auditorium from September until early May. The fall schedule will be available in August.

#### THE ECOLOGY SHOP

##### New items in the Shop for kids of all ages.

Items include Audubon plush birds with real bird calls...make your own chocolate or chewing gumkits...environmental science box kits. Also stop in to see our ever-changing assortment of books and plants.

**Senior Citizens Days:** 10% off on Wednesdays

#### GREENHOUSE

The greenhouse is a year-round tropical plant paradise and a site for controlled environmental research. Summer highlights include a collection of common and unusual herbs. The collection features licorice, parsley, and many different representations of thyme and rosemary. The textures and colors of the blooming herbs are beautiful. The greenhouse is open daily until 3:30 p.m. with a free permit (see HOURS).

#### HOURS

**Summer Hours: April 1 - September 30**

**Public attractions:** Mon.-Sat., 9-6, Sun. 1-6; closed public holidays. The greenhouse closes at 3:30 daily.

**The Ecology Shop:** Mon.-Fri., 11-5, Sat. 9-5, Sun. 1-5. (Please note: The shop is closed Mon.-Sat. from 1-1:30.)

**Free permits are required and are available at the Gifford House Visitor and Education Center until one hour before closing time.**

#### FERN GLEN TOURS

Native Plant Program Assistant Janet Leete leads **free tours of the Fern Glen** on Tuesdays at 11 a.m. and 2 p.m. Pick up your free visitor permit at the Gifford House beforehand (see hours).

#### GROUP TOURS

We offer guided tours of the Gifford Garden, Fern Glen or Greenhouse, for garden clubs, horticulturists, community groups, and other groups. Tours should be arranged four weeks in advance. For information on fees, or to make reservations call Ms. Luanne Panarotti at 845-677-7600 ext. 317.

#### VOLUNTEER OPPORTUNITIES

Call Ms. Susan Eberth at 845-677-7600 ext. 316 or visit [www.ecostudies.org/welcome/volunteer.html](http://www.ecostudies.org/welcome/volunteer.html).

#### MEMBERSHIP

Join the Institute of Ecosystem Studies. Benefits include subscription to the IES Newsletter, member's rate for courses and excursions, a 10% discount on IES Ecology Shop purchases, and participation in a reciprocal admissions program. Individual membership: \$40; family membership: \$50. Call the Development Office at 845-677-7600 ext. 120.

#### The Institute's Aldo Leopold Society

In addition to receiving the benefits listed above, members of The Aldo Leopold Society are invited guests at spring and fall IES science updates. Call the Development Office at 845-677-7600 ext. 120.

#### TO CONTACT IES ...

... **for research, graduate opportunities, library and administration:**

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Street address: Plant Science Building,  
65 Sharon Tpke. (Rte. 44A), Millbrook, N.Y.

... **for education, general information and The Ecology Shop:**

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Box R, Millbrook NY 12545-0178  
Tel: 845-677-5359 • Fax: 845-677-6455

The Ecology Shop: 845-677-7600 ext. 309

Street address: Gifford House Visitor and Education Center, 181 Sharon Tpke. (Rte. 44A), Millbrook, N.Y.

... **IES website:** [www.ecostudies.org](http://www.ecostudies.org)

For information on current IES public events and attractions, visit: [www.ecostudies.org/welcome/ThisWeek.html](http://www.ecostudies.org/welcome/ThisWeek.html).

For garden tips, visit: [www.ecostudies.org/welcome/gardens.html](http://www.ecostudies.org/welcome/gardens.html).